46. (New) The microfastening system of Claim 45 wherein said substrate is formed from materials selected from the group consisting of metals, carbon, silicon, germanium, polymers and composites thereof.

47. (New) The microfastening system of Claim 44 wherein said nanotubes are at least partially multi-walled.

48. (New) The microfastening system of Claim 44 wherein the nanotubes are functionalized to a non-linear shape.

49. (New) The microfastening system of Claim 48 wherein the non-linear nanotubes of said first fastening element are selected form hooks, loops, spirals and combinations thereof.

50. (New) The microfastening system of Claim 44 wherein said nanotubes of at least one of said fastening elements are selectively deformable.

51. (New) The microfastening system of Claim 44 wherein said fastening elements are reusable.

52. (New) A microfastener comprising:

a substrate including an attachment surface; and

a plurality of functionalized non-linear nanotubes attached to and extending from said attachment surface, wherein the nanotubes have a free standing end which is free of the surface.

53. (New) The microfastener of Claim 52 wherein said substrate is formed from materials selected from the group consisting of metals, carbon, silicon, germanium, polymers and composites thereof.

54. (New) The microfastener of Claim 52 wherein said nanotubes are at least partially multi-walled.

55. (New) The microfastener of Claim 52 wherein the non-linear nanotubes of said fastening element are selected from the group consisting of loops, hooks, spirals, and combinations thereof.

56. (New) The microfastener of Claim 52 wherein at least some of the nanotubes of said microfastener are selectively deformable.

57. (New) A method of manufacturing a microfastener having nanotubes with two ends, comprising the steps of:

a) providing a substrate having an attachment surface;

b) introducing a plurality of open ended nanotubes to said substrate whereby said nanotubes are attracted to said attachment surface and become affixed thereto, wherein at least some of the nanotubes become affixed at only one end.

58. (New) The method of Claim 57 wherein said nanotubes are functionalized prior to attaching to said substrate.

59. (New) The method of Claim 57 wherein said nanotubes are functionalized during attachment to said substrate.

60. (New) The method of Claim 57 wherein said nanotubes are functionalized after attachment to said substrate.

61. (New) The method of Claim 57 wherein said substrate is formed from materials selected from the group consisting of metals, carbon, silicon, germanium, polymers and composites thereof.

62. (New) The method of Claim 57 wherein said nanotubes are at least partially multi-walled.

63. (New) The method of Claim 57 wherein the non-linear nanotubes of said fastening element are selected from the group consisting of loops, hooks, spirals, and combinations thereof.

64. (New) The method of Claim 57 wherein at least some of said nanotubes are selectively deformable.

65. (New) The method of Claim 57 wherein said nanotubes are attached to said substrate in the presence of an electric field.

66. (New) The method of Claim 57 wherein said microfastener is reusable.